

REMARKS

By this Amendment, claims 3 and 4 have been amended, and claims 15-19 have been added. Accordingly, claims 1-19 are pending in the present application. The amendments made to claims 3 and 4 remove unnecessary limitations from the claims and clarify the language therein. These amendments have not been made to define over the art of record.

Claims 1-14 stand rejected under 35 U.S.C. Section 102(e) being anticipated by U.S. Patent No. 6,185,312 to Nakamura et al. Applicant respectfully traverses this rejection.

Claims 1-5

Among the limitations of independent claim 1 which are neither disclosed nor suggested in the prior art of record is an electronic watermark system which includes “control means for controlling a degree of insertion strength of the electronic watermark with reference to the data amount of the digital image per unit time.”

Because the degree of insertion strength of the electronic watermark is controlled based on the data amount of the digital image per unit of time, the watermark strength is capable of being adjusted on insertion or embedding of the watermark in the digital image. Accordingly, the detection strength of the watermark can be maintained and the reduction of the quality of the image can be suppressed.

Nakamura et al. neither teaches nor suggests controlling a degree of insertion strength of the electronic watermark based on the data amount of the digital image per unit time. In fact, Nakamura discloses no more than that which is described as prior art on page 5, lines 12-14 of the present application. As described in the present application, prior art watermark embedding techniques altered the brightness of the DCT coefficients that

corresponded to components of the watermark image in accordance with the strength of the watermark. This is exactly the teaching of Nakamura et al.

As described in Nakamura et al. at column 5, lines 56-62, the watermark information is embedded sequentially by an information embedding section by quantizing the coefficients using the watermark information. This is further described from column 8, line 62 through column 9, line 47 wherein it is provided that the coefficients are changed in value using information regarding the intensity (i.e., strength) of the watermark information. Thus, it is clear that Nakamura et al. teaches that it is the DCT coefficients that are altered. Therefore, Nakamura et al. teaches no more than that which is described as prior art in the present application, and does not teach nor suggest “controlling a degree of insertion strength of the electronic watermark with reference to the data amount of the digital image per unit time” as required by independent claim 1. Accordingly, it is respectfully submitted that independent claim 1 patentably distinguishes over the art of record.

Claims 2-5 depend either directly or indirectly from independent claim 1 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitation of the claims from which they depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 2-5 are likewise patentable.

Claims 6-10

Among the limitations of independent claim 6 which are neither disclosed nor suggested in the prior art of record is a method of inserting an electronic watermark into a digital image which includes “controlling a degree of insertion strength of the electronic watermark in response to the measurement result signal to insert, into the digital image, the electronic watermark adjusted by the degree of insertion strength.”

As described above, Nakamura et al., neither teaches nor suggests these limitations, and teaches no more than that which is described as prior art in the present application. Accordingly, it is respectfully submitted that independent claim 6 patentably distinguishes over the art of record.

Claims 7-10 depend either directly or indirectly from independent claim 6 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 7-10 are likewise patentable.

Claims 11-14

Among the limitations of independent claim 11 which are neither disclosed nor suggested in the prior art of record is a method of inserting an electronic watermark into a digital image which includes “detecting a data amount of the digital image per unit time” and “adjusting a degree of insertion strength of the electronic watermark on the basis of the data amount detected.”

As described above, Nakamura et al. neither teaches nor suggests these limitations, and teaches no more than that which is described as prior art in the present application. Accordingly, it is respectfully submitted that independent claim 11 patentably distinguishes over the art of record.

Claims 12-14 depend either directly or indirectly from independent claim 11 and include all the limitations found therein. Each of these dependent claims include additional limitations which, in combination with the limitations of the claims from which they depend, are neither disclosed nor suggested in the prior art of record. Accordingly, claims 12-14 are likewise patentable.

New claims 15-19 have been added to more fully cover the scope of the present invention. In particular, new claims 15-19 correspond to claims 1-5, but have been written to remove means-plus-function limitations.

The prior art made of record and not relied upon has been carefully reviewed. It is believed that these references, either alone or combined with any other references of record, do not render the pending claims unpatentable.

In view of the foregoing, favorable consideration of the amendments to claims 3 and 4, favorable consideration of new claims 15-19, and allowance of the present application with claims 1-19 is respectfully and earnestly solicited.

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Respectfully submitted,

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